

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 4302

Roll No.

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B. Tech.

(Semester-I) Theory Examination, 2012-13

MANUFACTURING PROCESS

Time : 2 Hours]

[Total Marks : 50

Note : Attempt questions from each Section as per instructions.

Section-A

Attempt *all* parts of this question. Each part carries 1 mark.

$1 \times 10 = 10$

1.
 - (a) Define ductility.
 - (b) What is tempering process?
 - (c) What is recrystallization temperature?
 - (d) Define porosity.
 - (e) What is abrasive?
 - (f) What are the functions of shielding gases?
 - (g) Define plant layout.

- (h) Define the production and productivity.
- (i) What is injection molding?
- (j) Define shrinkage allowance?

Section-B

Attempt any *three* parts of this questions. Each question carries 5 marks. $5 \times 3 = 15$

- 2. (a) What are the main factors responsible for use of non-ferrous metals?
- (b) List the different forging operations and describe upsetting and drawing out.
- (c) What is planning machine? Describe its working principle with the help of a neat diagram.
- (d) Briefly explain but welding and seam welding with a neat sketch.
- (e) Explain the welding defects and there remedies.

Section-C

Attempt *all* questions of this Section. $5 \times 5 = 25$

- 3. Draw and explain stress strain diagram for mild steel and high carbon steel.

Or

Why is normalizing done? Explain the process of normalizing.

4. What is hot rolling? Describe the principle of hot rolling, giving a few examples of hot rolling products.

Or

What is a Gating system? Draw a neat sketch to illustrate its various elements. Also briefly write the function of each element.

5. Briefly describe the following lathe operations :
Plain turning facing, Taper turning, and Drilling.

Or

Write short notes on the following :

- (i) Welding rods
- (ii) Fluxes
- (iii) Gas flames.

6. What is plant layout? What are the main objectives of plant layout?

Or

What is seasoning of timber? Briefly describe different methods of seasoning of timber.

7. Write short notes on any two of the following :

- (i) Powder metallurgy process
- (ii) Galvanizing and electroplating
- (iii) Different types of plastics
- (iv) Tool steel.